

## WEST Search History

DATE: Wednesday, June 08, 2005

<b>Hide?</b>	<b><u>Set Name</u></b>	<b><u>Query</u></b>	<b><u>Hit Count</u></b>
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L7	L6 and transgenic	52
<input type="checkbox"/>	L6	L5 not L4	126
<input type="checkbox"/>	L5	L1 and plant	157
<input type="checkbox"/>	L4	L3 and plant	31
<input type="checkbox"/>	L3	L1 and L2	32
<input type="checkbox"/>	L2	feedback adj inhibition	1237
<input type="checkbox"/>	L1	glycerol adj 3 adj phosphate adj dehydrogenase	408

END OF SEARCH HISTORY

b 5,10

08jun05 13:26:08 User208737 Session D546.2  
\$0.00 0.102 DialUnits File410  
\$0.00 Estimated cost File410  
\$0.02 TELNET  
\$0.02 Estimated cost this search  
\$0.42 Estimated total session cost 0.216 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1969-2005/May W5  
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File 10:AGRICOLA 70-2005/May  
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Set	Items	Description
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? s	glycerol and phosphate and dehydrogenase and gene	
	40374	GLYCEROL
	217425	PHOSPHATE
	142950	DEHYDROGENASE
	1026802	GENE
S1	497	GLYCEROL AND PHOSPHATE AND DEHYDROGENASE AND GENE
? s	s1 and plant	
	497	S1
	1672350	PLANT
S2	32	S1 AND PLANT
? s	s2 and feedback	
	32	S2
	43302	FEEDBACK
S3	1	S2 AND FEEDBACK
? t	3/1/5	
>>>Item 5 is not within valid item range for file 10		
? t	3/5/1	

3/5/1 (Item 1 from file: 10)  
DIALOG(R)File 10:AGRICOLA  
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3784979 22010918 Holding Library: AGL

Different signalling pathways contribute to the control of GPD1  
**gene** expression by osmotic stress in *Saccharomyces cerevisiae*

Rep, M. Albertyn, J.; Thevelein, J.M.; Prior, B.A.; Hohmann, S.

Katholieke Universiteit, Leuven, Flanders, Belgium.

Reading, U.K. : Society for General Microbiology, c1994-

Microbiology. Mar 1999. v. 145 (pt.3) p. 715-727.

ISSN: 1350-0872 CODEN: MROBEO

DNAL CALL NO: QR1.J64

Language: English

Includes references

Place of Publication: England

Subfile: IND; OTHER FOREIGN;

Document Type: Article

Yeast cells respond to a shift to higher osmolarity by increasing the cellular content of the osmolyte \*\*\*glycerol\*\*\*. This response is accompanied by a stimulation of the expression of genes encoding enzymes in the \*\*\*glycerol\*\*\* production pathway. In this study the osmotic induction of one of those genes, GPD1, which encodes **glycerol-3-phosphate**

\*\*\*dehydrogenase\*\*\*, was monitored in time course experiments. The response is independent of the osmolyte and consists of four apparent phases: a lag phase, an initial induction phase, a **feedback** phase and a sustained long-term induction. Osmotic shock with progressively higher osmolyte concentrations caused a prolonged lag phase. Deletion of HOG1, which encodes the terminal protein kinase of the high osmolarity

**glycerol** (HOG) response pathway, led to an even longer lag phase and drastically lower basal and induced GPD1 mRNA levels. However, the induction was only moderately diminished. Overstimulation of Hog1p by deletion of the genes for the protein phosphatases PTP2 and PTP3 led to higher basal and induced mRNA levels and a shorter lag phase. The protein phosphatase calcineurin, which mediates salt-induced expression of some genes, does not appear to contribute to the control of GPD1 expression. Although GPD1 expression has so far not been reported to be controlled by a general stress response mechanism, heat-shock induction of the GPD1 mRNA level was observed. However, unregulated protein kinase A activity, which strongly affects the general stress response, only marginally altered the mRNA level of GPD1. The osmotic stimulation of GPD1 expression does not seem to be mediated by derepression, since deletion of the SSN6 **gene**, which encodes a general repressor, did not significantly alter the induction profile. A hypoosmotic shock led to a transient 10-fold drop of the GPD1 mRNA level. Neither the HOG nor the protein kinase C pathway, which is stimulated by a decrease in external osmolarity, is involved in this effect. It was concluded that osmotic regulation of GPD1 expression is the result of an interplay between different signalling pathways, some of which remain to be identified.

Section Headings: F600 **PLANT PHYSIOLOGY AND BIOCHEMISTRY**; F200

**PLANT BREEDING**

? s s2 and transgenic

32 S2

79809 TRANSGENIC

S4 2 S2 AND TRANSGENIC

? t 4/3/1-2

4/3/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013013029 BIOSIS NO.: 200100184868

**Plant DNA encoding glycerol-3-phosphate dehydrogenase (GPDH)**

AUTHOR: Topfer Reinhard (Reprint); Hausmann Ludger; Schell Jozef

AUTHOR ADDRESS: Bergheim, Germany\*\*Germany

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1237 (3): Aug. 15, 2000 2000

MEDIUM: e-file

PATENT NUMBER: US 6103520 PATENT DATE GRANTED: August 15, 2000 20000815

PATENT CLASSIFICATION: 435-3201 PATENT ASSIGNEE: Max-Planck-Gesellschaft zur Forderung der Wissenschaften E.V., Munich, Germany PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

4/3/2 (Item 1 from file: 10)

DIALOG(R)File 10:AGRICOLA

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3954615 23240976 Holding Library: AGL

Single and double overexpression of C4-cycle genes had differential effects on the pattern of endogenous enzymes, attenuation of photorespiration and on contents of UV protectants in **transgenic** potato and tobacco plants

Hausler, R.E. Rademacher, T.; Li, J.; Lipka, V.; Fischer, K.L.; Schubert, S.; Kreuzaler, F.; Hirsch, H.J.

Oxford : Oxford University Press.

Journal of experimental botany. Sept 2001. v. 52 (362) p. 1785-1803.

ISSN: 0022-0957 CODEN: JEBOA6

DNAL CALL NO: 450 J8224

Language: English

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